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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/091,934	03/06/2002	Amir Alon	IL920020007US1	7058

7590 12/29/2005

IBM CORPORATION
INTELLECTUAL PROPERTY LAW DEPT.
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EXAMINER

LEVIN, NAUM B

ART UNIT	PAPER NUMBER
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2825

DATE MAILED: 12/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/091,934

Applicant(s)

ALON ET AL.

Examiner

Naum B. Levin

Art Unit

2825

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 42-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 42-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 May 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is in response to application 10/091,934 and RCE filed on 09/29/2005. Claims 1-41 have been canceled. Claims 42-44 remain pending in the application.

Claim Objections

2. Claim 44 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim, or amend the claim to place the claim in proper dependent form. Claim 44 is dependable of claim 4, which ^{is} ~~are~~ canceled by Applicants.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 42-44 are rejected under 35 U.S.C. 102(e) as being unpatentable by Suaya et al. (US Pub. No.: 2003/0131334).

4. As to claims 42-43 Suaya discloses:

(42) A method comprising:

when designing an integrated circuit operatable at both DC and AC frequencies (In general, signal propagation in an integrated circuit can be characterized as operating within two distinct subdomains: the domain where inductance effects are negligible (the rc domain), and the domain where inductance effects are appreciable (the rlc domain) – [0003-0004]; rlc parameters are frequency dependent [0118]), selecting one of a set of transmission line topologies for critical interconnect lines (providing a signal path between a source and a destination, the signal path having multiple branches; providing parallel ground wires spaced from and on opposing sides of the signal path; and for at least one branch, calculating an rlc relationship between the signal path and the ground wires ... wherein the rlc relationship enables the branch to exhibit transmission-line behavior and physical parameters: width, wire separation, etc—claims 1-5 and Figs. 2-3) capable of carrying high frequency signals (the method ... uses inductance effects caused by the propagation of a high-speed signal on a signal wire sandwiched between opposing parallel ground wires –[0005]) ([0003]- [0005]; [0009]-[0011]; [0038]- [0039]; [0049]; [0064]; [0067]; claims 1-5);

(43) An integrate circuit design library (data/database-[0153]-[0154] comprising:
a set of transmission line topologies for critical interconnect lines (providing a signal path between a source and a destination, the signal path having multiple branches; providing parallel ground wires spaced from and on opposing sides of the signal path; and for at least one branch, calculating an rlc relationship between the signal path and the ground wires ... wherein the rlc relationship enables the branch to exhibit transmission-line behavior and physical parameters: width, wire separation, etc—

claims 1-5 and Figs. 2-3) capable of carrying DC and AC signals (In general, signal propagation in an integrated circuit can be characterized as operating within two distinct subdomains: the domain where inductance effects are negligible (the rc domain), and the domain where inductance effects are appreciable (the rlc domain) –[0003-0004]; rlc parameters are frequency dependent [0118]), which topologies comprise return paths therein (the loop inductance of the signal wire 30 with ground wires 32, 34 as return paths can be controlled by altering the parameters of the design-[0046]) ([0003]- [0005]; [0009]-[0011]; [0038]- [0039]; [0046]; [0049]; [0064]; [0067]; claims 1-5); and

a set of parameterized (claims 1-5), equivalent RLC ladder networks (...for a first branch downstream of a second branch, calculating includes matching the impedance at a junction between the first branch and the second branch –claim 6), one per topology (for at least one branch, calculating an rlc relationship between the signal path and the ground wires-claim 1) (Abstract; claims 1-6; claim 23; [0041]).

5. As to claim 44 Suaya recites:

The method implementing means for performing time domain analysis for each transmission line placed into an integrate circuit design ([0141]).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Naum B. Levin whose telephone number is 571-272-1898. The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew S. Smith can be reached on 571-272-1907. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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VUTHE SIEK
PRIMARY EXAMINER